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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHIN, KYUNG H	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/915,609	SADOT ET AL.	
	Examiner	Art Unit	
	Kyung H. Shin	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responding to application papers filed 3/14/2006.

2. Claims **1 - 22** are pending. Claims **1, 19** have been amended. Independent claims are **1, 19**.

Response to Arguments

3. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

3.1 Applicant argues that the referenced prior art does not disclose *"... pre-assignment of different groups of session ID values to respective ones of the servers ... " (see Remarks Page 6, Lines 11-12) "... pre-assignment of different groups of session ID values to different servers ... " (see Remarks Page 6, Lines 16-17)*

The Brendel (6,772,333) and Gongwer (6,138,120) prior art combination discloses the selection of a session identifier from a pre-setup pool of unassigned session identifiers. (see Gongwer col. 2, lines 2-5; col. 9, lines 52-54; col. 12, lines 54-57; col. 12, lines 62-65: session identifier selected from pool of unassigned session identifiers) Brendel and Gongwer discloses the replacement of session identification information such as a session identifier being generated by a particular server to session identification information (i.e. a

session identifier) being selected from a pool of unassigned server identifiers. In addition, Brendel and Choquier (5,774,668) prior art combination discloses the grouping of application servers based on type of service. (see Choquier col. 1, lines 64-67: grouping of application servers)

Claim Rejection - 35 USC § 103

The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 - 5, 7 - 12, 14 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel (US Patent No. 6,772,333) in view of Choquier et al. (US Patent No. 5,774,668) and further in view of Gongwer et al. (US Patent No. 6,138,120).

Regarding Claim 1, **Brendel discloses a method of load balancing messages to servers of a server farm, by a load balancer, comprising:**

b) determining, by the load balancer, for at least some client messages including a non-empty session ID field, which server or sub-group of servers is associated with the ID in the ID field, responsive to the configured information; (see Brendel col. 5, lines 61-67: determine designated server from multiple server for client-server message processing) and

c) selecting, by the load balancer, a server to receive each of the at least some client messages, at least partially responsive to the determination. (see Brendel

col. 9, lines 2-7: load balancer extracts session ID and server information for client-server message processing)

Brendel discloses the setup of session identification information such as generating session ID values. Brendel does not specifically disclose a session identifier being selected from a range of values or a session identifier being selected from a pool of unassigned session identifiers.

However, Choquier and Gongwer disclose:

a) configuring the load balancer with information specifying a pre-assignment of different groups of session ID values to respective ones of the servers, each of said servers being operative to assign session ID values from its associated one of the pre-assigned groups to sessions handled by that server; (see Choquier col. 15, lines 28-41: load management system utilizing a range of values assigned to each entity (i.e. server, processor) and utilized in the generation of a calculated ID value (i.e. session ID or session information)) and (see Gongwer col. 2, lines 2-5; col. 9, lines 52-54; col. 12, lines 54-57; col. 12, lines 62-65: session identifier selected from pool of unassigned session identifiers)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values to be used generating session ID values for a load management system as taught by Choquier, and to enable the selection of a session identifier from a pool of session identifiers as taught by Gongwer. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers (see

Choquier col. 1, lines 54-58: "*... mechanisms for dynamically balancing the processing load among the application servers ... mechanisms for dynamically allocating processing resources ... so that fluctuations in usage levels ... can be efficiently accommodated...*"), and to employ Gongwer in order to enable the usage of shared transactions and resources across multiple independent client sessions. (see Gongwer col. 1, lines 55-61: "*... a mechanism ... permit sharing of the uncommitted data values between the independent clients ... supports the sharing of session, query, stored procedure, and transaction context across multiple, independent client applications. The system includes a number of discrete technologies and techniques ...* ").

Regarding Claim 2, Brendel discloses managing a table which lists for at least one of the servers or sub-groups of servers a table of session IDs utilized in the load management of a plurality of servers. (see Brendel col. 5, lines 46-49; col. 5, lines 61-67: session ID table utilized for management of client-server message) Brendel does not specifically disclose a range of values for session IDs utilized managing system load capabilities. However, Choquier discloses a method according to claim 1, wherein configuring the load balancer comprises a range of values from which the server may assign session IDs. (see Choquier col. 15, lines 28-41: a load management system utilizing of a range of values assigned to each entity (i.e. CPU, server, processor) within a group; values utilized in the generation of a calculated value (i.e. session ID, server information))

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Brendel to utilize a range of values to be used generating session ID values for a load management system as taught by Choquier. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers. (see Choquier col. 1, lines 54-58)

Regarding Claim 3, Brendel discloses a method according to claim 1, wherein configuring the load balancer comprises managing a table which lists for at least one of the servers or sub-groups of servers, one or more values of a sub-set of the bits of session IDs associated with the server. (see Brendel col. 9, lines 7-10; col. 15, lines 4-4: server ID information encoded within session ID field, sub-group of servers to process session ID messages)

Regarding Claim 4, Brendel discloses a method according to claim 1, wherein configuring the load balancer comprises providing a function which correlates between session IDs and the server which assigned the session ID. (see Brendel col. 7, lines 41-50; col. 7, lines 61-64: atomic operation (i.e. function) managing session IDs indicating assigned server to process client requests)

Regarding Claim 5, Brendel discloses a method according to claim 1, comprising configuring at least one of the servers with a rule on the session ID values it may assign to sessions. (see Brendel col. 8, lines 35-42: designation or means (i.e. rule) to uniquely

generate a session ID for session identification)

Regarding Claim 7, Brendel does not disclose configuration information transmitted to a server for client-server message processing. However, Choquier discloses a method according to claim 5, wherein configuring the load balancer comprises configuring automatically by a module running on the load balancer, which transmits configuration instructions to at least one of the servers. (see Choquier col. 15, lines 28-41: load management system utilizing configuration information (i.e. range of values) for an entity (i.e. server, processor); values utilized in the generation of a calculated value (i.e. session ID, server information))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values to be used generating session ID values for a load management system as taught by Choquier. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers. (see Choquier col. 1, lines 54-58)

Regarding Claim 8, Brendel discloses a method according to claim 7, wherein configuring automatically by the load balancer comprises configuring responsive to input received from the at least one of the servers. (see Brendel col. 8, lines 16-18: session ID generated by server based on means, transmitted to load balancer for placement in session ID table)

Regarding Claim 9, Brendel discloses a method according to claim 5, wherein configuring at least one of the servers comprises configuring substantially all the servers in the farm with respective sub-groups of allowed session IDs which do not include common session IDs. (see Brendel col. 4, lines 29-32: unique session IDs generated for usage within load management system)

Regarding Claim 10, Brendel discloses using a load balancer and at least one server in a load management system. (see Brendel col. 9, line 63 - col. 10, line 4: client-server message processing system utilizing session ID table) Brendel does not disclose a subset of available session IDs not assigned to any servers. However, Choquier discloses a method according to claim 9, wherein at least some of a plurality of available session IDs are not assigned to any of the servers. (see Choquier col. 15, lines 28-41: a load management system utilizing of a range of values assigned to each entity (i.e. CPU, server, processor) within a group; values utilized in the generation of a calculated value (i.e. session ID, session information))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values used generating session ID values and selecting a subset of values not available for assignment by servers as taught by Choquier. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers. (see Choquier col. 1, lines 54-58)

Regarding Claim 11, Brendel discloses a method according to claim 9, wherein configuring substantially all the servers comprises assigning substantially a same number of session IDs to each of the servers. (see Choquier col. 15, lines 28-41: a load management system utilizing of a range of values and a number of values assigned to each entity (i.e. server, processor); values utilized in the generation of a calculated value (i.e. session ID, session information))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values used generating session ID values utilized in a load management system and selecting a number of values for each entity as taught by Choquier. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers. (see Choquier col. 1, lines 54-58)

Regarding Claim 12, Brendel discloses using a configured load balancer and at least one server in a load management system. (see Brendel col. 9, line 63 - col. 10, line 4: client-server message processing utilizing session ID table for load management) However, Choquier discloses a method according to claim 9, wherein configuring substantially all the servers comprises assigning different numbers of session IDs to at least two of the servers. (see Choquier col. 15, lines 28-41: a load management system utilizing of a range of values and selecting a different number of values for two entities (i.e. server, processor); values utilized in the generation of a calculated value (i.e.

session ID, session information))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values used generating session ID values utilized in a load management system as taught by Choquier. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers. (see Choquier col. 1, lines 54-58)

Regarding Claim 14, Brendel discloses a method according to claim 1, wherein selecting a server to receive a client message comprises selecting a server which assigned the session ID of the message. (see Brendel col. 5, lines 61-67: client request directed to assigned server based on session ID value)

Regarding Claim 15, Brendel discloses a method according to claim 1, wherein selecting a server to receive a client message comprises selecting a server in a sub-group of servers which shares information with a server which assigned the session ID of the message. (see Brendel col. 5, lines 46-49; col. 14, lines 55-63: client requests directed to assigned server based on session ID, single server or a set of servers selected to process client requests)

Regarding Claim 16, Brendel discloses a method according to claim 1, wherein the client messages comprise SSL client messages. (see Brendel col. 7, lines 26-31: SSL

technology utilized in message processing)

Regarding Claim 17, Brendel discloses a method according to claim 1, wherein the session ID values comprise application layer ID values. (see Brendel col. 5, lines 13-17: application aware load balancer looks within IP packets data payload for useful information (i.e. session ID value) for load management system)

Regarding Claim 18, Brendel discloses a method according to claim 1, additionally comprising managing a list of ID values actually assigned by one or more servers and determining, by the load balancer, for at least some client messages including a non-empty session ID field, which server or sub-group of servers is associated with the ID in the ID field, responsive to the managed list. (see Brendel col. 9, line 63 - col. 10, line 4; col. 15, lines 4-4: load balancer utilizing a list of session IDs to enable efficient system load management)

Regarding Claim 19, Brendel discloses a load balancer, comprising:

b) an input interface adapted to receive client messages; (see col. 6, lines 1-3: network interface for communications between load balancer, clients, servers) and

c) a load balancing unit which is adapted to select a server to receive at least one of the client messages, at least partially responsive to the contents of the memory unit, and to forward the at least one of the client messages to the selected

server. (see col. 9, line 63 - col. 10, line 4: client message directed to assigned server)

Brendel discloses the setup of session identification information such as generating session ID values. Brendel does not specifically disclose a range of values for session IDs utilized managing system load capabilities or a session identifier being selected from a pool of unassigned session identifiers. However, Choquier and Gongwer disclose:

a) a memory unit adapted to store configured information specifying a pre-assignment of different groups of session ID values to respective ones of the servers, each of said servers being operative to assign session ID values from its associated one of the pre-assigned groups to sessions handled by the server; (see Choquier col. 15, lines 28-41: a load management system utilizing a range of values assigned to each entity (i.e. CPU, server, processor) within a group; values utilized in the generation of a calculated value (i.e. session ID, session information)) and (see Gongwer col. 2, lines 2-5; col. 9, lines 52-54; col. 12, lines 54-57; col. 12, lines 62-65: session identifier selected from pool of unassigned session identifiers)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values used generating session ID values utilized in a load management system as taught by Choquier, and to enable the selection of a session identifier from a pool of session identifiers as taught by Gongwer. One of ordinary skill in the art would be motivated to employ Choquier in

order to efficiently balance message processing load among a set of servers (see Choquier col. 1, lines 54-58), and to employ Gongwer in order to enable the usage of shared transactions and resources across multiple independent client sessions (see Gongwer col. 1, lines 55-61).

Regarding Claim 20, Brendel discloses a load balancer according to claim 19, comprising a configuration module adapted to store the configured information in the memory unit. (see Brendel col. 9, lines 17-22: session ID table information for load-balancer (i.e. configuration module) stored (i.e. disk or memory) within server system)

Regarding Claim 21, Brendel discloses generating a session ID used in message processing for a client by one or more servers. (see Brendel col. 7, lines 40-44: load-balancer (i.e. configuration module) utilizing instruction (i.e. atomic operation) for generation of session IDs) Brendel does disclose a range or set of session ID values which may be used for client-server message processing. However, Choquier discloses a load balancer according to claim 20, wherein the configuration module is adapted to generate instructions directed to one or more servers on the session ID values they may use. (see Choquier col. 15, lines 28-41: a load management system utilizing a range of values assigned to each entity (i.e. server, processor); values utilized in the generation of a calculated value (i.e. session ID, session information))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a range of values used generating

session ID values utilized in a load management system as taught by Choquier. One of ordinary skill in the art would be motivated to employ Choquier in order to efficiently balance message processing load among a set of servers. (see Choquier col. 1, lines 54-58)

Regarding Claim 22, Brendel discloses a load balancer according to claim 19, wherein the load balancing unit comprises a comparator adapted to compare at least a portion of at least one of the fields of received client messages to information stored in the memory unit. (see Brendel col. 9, line 65 - col. 10, line 2: compare (i.e. comparator) session ID in client message to a value in session ID table)

5. **Claims 6, 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel-Choquier-Gongwer and further in view of Baker et al. (US Patent No. 6,611,498).

Regarding Claim 6, Brendel discloses using a configured load balancer and at least one server in a load management system. (see Brendel col. 9, line 63 - col. 10, line 4: client-server message processing utilizing session ID table) Brendel does not specifically disclose a user interface used to configure the load balancer. However, Baker discloses a method according to claim 5, wherein configuring the load balancer comprises configuring through a user interface, which configures responsive to user instructions. (see Baker col. 16, lines 56-59; col. 17, lines 4-11; col. 1, lines 22-27; col.

2, line 67 - col. 3, line 4: system manager via user interface utilized to manage load management system within a client-server environment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a user interface to configure and manage a system load mechanism and server systems as taught by Baker. One of ordinary skill in the art would be motivated to employ Baker in order to provide expedient, comprehensive and secure access to client-server message processing. (see Baker col. 2, lines 6-11: "*... provides expedient, comprehensive and more secure data access and reporting services to customers ...* ")

Regarding Claim 13, Brendel discloses using a configured load balancer and at least one server in a load management system. (see Brendel col. 9, line 63 - col. 10, line 4: client-server message processing utilizing session ID table) Brendel does not specifically disclose a user interface to configure load balancer. However, Baker discloses a method according to claim 1, wherein configuring the load balancer comprises configuring by a system manager. (see Baker col. 16, lines 56-59; col. 17, lines 4-11; col. 1, lines 22-27; col. 2, line 67 - col. 3, line 4: system manager via user interface utilized to manage load management system within a client-server environment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brendel to utilize a user interface or system manager to configure a system load mechanism and server systems as taught by Baker. One of

ordinary skill in the art would be motivated to employ Baker in order to provide expedient, comprehensive and secure access to client-server message processing. (see Baker col. 2, lines 6-11)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KHS
Kyung H Shin
Patent Examiner
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April 7, 2006

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